

## CLAIMS

What is claimed is:

1. An intervertebral disc replacement trial, comprising:  
a shaft having a handle at a proximal end; and  
a head disposed at a distal end of the shaft, the head including first and second surfaces that are spaced apart and sized for insertion into at least one intervertebral disc space defined by respective endplates of an adjacent pair of vertebral bones of a spinal column, and for facilitating distraction of the vertebral bones in a direction along a longitudinal axis of the spinal column.
2. The trial of claim 1, wherein the first surface includes a generally oval footprint area for operative engagement with an endplate of a first one of the vertebral bones, and the second surface includes an area for operative engagement with an endplate of a second one of the vertebral bones.
3. The trial of claim 1, wherein at least one of:  
the first surface includes a substantially convex area for operative engagement with an endplate of a first one of the vertebral bones;  
the substantially convex area of the first surface is sized and shaped to operatively engage the endplate of the first vertebral bone, which is a lower endplate thereof having a substantially concave character;  
the second surface includes a substantially flat area for operative engagement with an endplate of a second one of the vertebral bones; and  
the substantially flat area of the second surface is sized and shaped to operatively engage the endplate of the second vertebral bone, which is an upper endplate thereof having a substantially flat character.
4. The trial of claim 1, wherein at least one of:  
the first surface is tapered towards its distal end to facilitate insertion of the head into the at least one intervertebral disc space; and  
the second surface is tapered towards its distal end to facilitate insertion of the

head into the at least one intervertebral disc space.

5. The trial of claim 4, wherein the first surface is tapered at about five degrees, and the second surface is tapered at about four degrees.

6. The trial of claim 1, further comprising at least one rib extending transversely away from the shaft and longitudinally along the shaft substantially to the head to provide stiffening to the head and shaft such that the head may be used to urge the vertebral bones apart.

7. An intervertebral disc replacement trial, comprising:  
a shaft having a handle at a proximal end;  
a head disposed at a distal end of the shaft, the head including first and second spaced apart surfaces operative for insertion into at least one intervertebral disc space defined by respective endplates of an adjacent pair of vertebral bones of a spinal column; and  
a stop member operable to prevent over-insertion of the head into the intervertebral disc space of the spinal column.

8. The trial of claim 7, wherein the stop member includes a stop element transversely extending from the head that is sized and positioned to engage at least one of the vertebral bones to prevent over-insertion of the head into the intervertebral disc space of the spinal column.

9. The trial of claim 8, wherein the stop element extends substantially perpendicularly from an anterior end of the head such that it engages an anterior surface of a lower one of the vertebral bones prevent over-insertion of the head into the intervertebral disc space of the spinal column.

10. A set of intervertebral disc replacement trials, each trial comprising:  
a shaft having a handle at a proximal end; and  
a head disposed at a distal end of the shaft, the head including first and second surfaces that are spaced apart and sized for insertion into at least one intervertebral

disc space defined by respective endplates of an adjacent pair of vertebral bones of a spinal column,

wherein one or more of the trials have heads of differing size to facilitate at least one of: (i) determining an appropriate size of an intervertebral disc replacement device to dispose within the intervertebral disc space; and (ii) distraction of the vertebral bones in a direction along a longitudinal axis of the spinal column.

11. The trial set of claim 10, wherein a head thickness, measured substantially from the first to the second surface, of at least one of the trials differs from a head thickness of at least one other of the trials.

12. The trial set of claim 11, wherein the head thicknesses differ by about 1 mm.

13. The trial set of claim 10, wherein a head square area of at least one of the trials differs from a head square area of at least one other of the trials.

14. The trial set of claim 13, wherein at least one of:  
a head thickness, measured substantially from the first to the second surface, of at least one of the trials differs from a head thickness of at least one other of the trials; and  
a least two heads of substantially the same head thickness have differing respective head square areas.

15. The trial set of claim 13, further comprising one or more intervertebral disc replacement devices.

16. A method of using a set of intervertebral disc replacement trials, each trial including a shaft having a handle at a proximal end, and a head disposed at a distal end of the shaft, the head including first and second surfaces that are spaced apart and sized for insertion into at least one intervertebral disc space defined by respective endplates of an adjacent pair of vertebral bones of a spinal column, the method comprising at least:

inserting a first of the trials into one of the intervertebral disc spaces to facilitate at least some distraction of the vertebral bones in a direction along a longitudinal axis of the spinal column; and

inserting a second of the trials into the intervertebral disc space to facilitate at least some further distraction of the vertebral bones along the longitudinal axis, where the second trial has a larger head thickness, measured substantially from the first to the second surface, than that of the first trial.

17. The method of claim 16, further comprising levering the handle of at least one of the first and second trials to facilitate the distraction of the vertebral bones.

18. The method of claim 16, further comprising repeating the insertion of further trials having larger and larger head thicknesses to facilitate the distraction of the vertebral bones to a target distance.

19. The method of claim 18, wherein the target distance is one that substantially maximizes the intervertebral space while substantially preserving an annulus and ligaments associated with the vertebral bones.

20. The method of claim 16, further comprising inserting an intervertebral disc replacement device into the intervertebral space after it has been distracted to the target distance.